

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 1 Problem no.: 3

Juror: Chen Yong Li Signature: Chen Yong Li

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application of appropriate mathematics** • reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles** • the opponent understood the **appropriate mathematics** presented • the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data** • the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent** • the reviewer appreciated the **important aspects** (especially the **controversial** ones) • the reviewer's **personal opinion** was in evidence (**not just superficial observations**) • such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding** of **concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: Hungary 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter $\pm 1$

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☒ Explanation of formulae and symbols
- ☒ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

4

Opp.: France 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☒ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent $\pm 1$

- ☐ Response to the reporter's solution
- ☒ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

6

Rev.: Slovenia 5

### Physics $\pm 3$

- ☒ Correct and relevant physics
- ☒ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer $\pm 1$

- ☒ Provides a thorough review of report and discussion
- ☒ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

6

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 1 Problem no.: 3

Juror: Michael Gierling Signature: Cedric

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem
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- an **application** of **appropriate mathematics**
- reasonable experimental technique to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate)
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- the opponent understood the **appropriate mathematics** presented
- the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data**
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Rep.: HUNGARY 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter $\pm 1$

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

3

Opp.: FRANCE 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent $\pm 1$

- ☐ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

5

Rev.: SLOVENIA 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer $\pm 1$

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

7

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 1 Problem no.: 3  
 Juror: Olga Iuiseva Signature: [Signature]

## A report should include:

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Rep.: Hungary 5

### Physics ±3

-1

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

0

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter ±1

-1

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

3

Opp.: France 5

### Physics ±3

0

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

0

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

0

- ☐ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

5

Rev.: Slovenia 5

### Physics ±3

+1

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

0

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

0

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

6

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 1 Problem no.: 3  
 Juror: Byland Signature: [Signature]

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem
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Rep.: Hungary 5

### Physics ±3

- ☐ Correct and relevant physics
- ☒ Scientific approach
- ☐ Validity of conclusions
- ☒ Accurate answers

### Presentation ±1

- ☒ Clear and understandable
- ☐ Appropriate manner
- ☒ Overall impression

### Reporter ±1

- ☐ Quality of experimental technique(s)
- ☒ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☒ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

3

Opp.: France 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

- ☐ Response to the reporter's solution
- ☒ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☒ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

6

Rev.: Slovenia 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

- ☒ Provides a thorough review of report and discussion
- ☒ Expresses own opinion about topics presented or discussed
- ☒ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

5

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 1 Problem no.: 3

Juror: KATHRYN ZEALAND Signature: K Zealand

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable experimental technique to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

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Rep.: GERGELY

5

Opp.: Marie-Cecile

5

Rev.: Ziger

5

### Physics ±3

- ☒ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☒ Accurate answers

-2

### Physics ±3

- ☒ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☐ Accurate answers

0

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

0

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☒ Overall impression too quite

+1/2

### Presentation ±1

- ☒ Clear and understandable
- ☒ Appropriate manner OK
- ☐ Overall impression

0

### Presentation ±1

- ☒ Clear and understandable
- ☒ Appropriate manner don't give opinions during question time
- ☒ Overall impression

0

### Reporter ±1

- ☒ Quality of experimental technique(s)
- ☒ Structure
- ☒ Explanation of formulae and symbols
- ☒ Appropriate models, conformity of dimensions
- ☒ Slides, on-site experiments, audio, video, as appropriate
- ☒ References, proper citations of ideas and input of others
- ☒ Novelty of the report
- ☐ Contribution to the discussion 2.5

-1

### Opponent ±1

- ☒ Response to the reporter's solution engage with theory more
- ☒ Shows the strong and weak points of the report
- ☒ Finds shortcomings or errors in the report
- ☒ Relevance of the questions
- ☒ Contribution to the discussion talk about experiment?

-1

### Reviewer ±1

- ☒ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☒ Relevance of questions to both the reporter and the opponent
- ☒ Draws attention to points missed by the reporter or the opponent

0

Final Grade: Reporter

2

Final Grade: Opponent

4

Final Grade: Reviewer

5

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 1 Problem no.: 3

Juror: AKyuldjiev Signature: [Signature]

Beads

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

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Rep.: \_\_\_\_\_ 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter $\pm 1$

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

3

Opp.: \_\_\_\_\_ 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent $\pm 1$

- ☐ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

4

Rev.: \_\_\_\_\_ 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer $\pm 1$

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

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**do not bend**

Final Grade: Reviewer

5

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 2 Problem no.: \_\_\_\_\_

Juror: Chuangyong Li Signature: [Signature]

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem
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- an **application** of **appropriate mathematics**
- reasonable experimental technique to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate)
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- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: France 5

### Physics ±3

- ☐ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter ±1

- ☐ Quality of experimental technique(s)
- ☒ Structure
- ☐ Explanation of formulae and symbols
- ☒ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☒ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

7

Opp.: Slovenia 5

### Physics ±3

- ☒ Correct and relevant physics
- ☐ Scientific approach
- ☒ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

- ☐ Response to the reporter's solution
- ☒ Shows the strong and weak points of the report
- ☒ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

7

Rev.: Hungary 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

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**do not bend**

Final Grade: Reviewer

5



# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 2 Problem no.: 11

Juror: Michael Gierling Signature: Georg

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem
- an **explanation** of the **observed phenomena**
- an **application** of **appropriate mathematics**
- reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate)
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- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles**
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- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: FRANCE

5

### Physics ±3

+2

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

+0,5

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter ±1

+0,5

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Opp.: SLOVENIA

5

### Physics ±3

+2

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

+0,5

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

+0,5

- ☐ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Rev.: HUNGARY

5

### Physics ±3

+1

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

+0,5

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

+0,5

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reporter

8

Final Grade: Opponent

8

Final Grade: Reviewer

7



# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 2 Problem no.: 11

Juror: Olga Lushcheva Signature: [Signature]

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles** • the opponent understood the **appropriate mathematics** presented • the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data** • the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent** • the reviewer appreciated the **important aspects** (especially the **controversial** ones) • the reviewer's **personal opinion** was in evidence (**not just superficial observations**) • such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding** of **concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: France 5

### Physics $\pm 3$

- ☒ Correct and relevant physics
- ☒ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter $\pm 1$

- ☒ Quality of experimental technique(s)
- ☒ Structure
- ☒ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☒ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

7

Opp.: Slovenia 5

### Physics $\pm 3$

- ☒ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent $\pm 1$

- ☒ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☒ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

6

Rev.: Hungary 5

### Physics $\pm 3$

- ☒ Correct and relevant physics
- ☐ Scientific approach
- ☒ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer $\pm 1$

- ☒ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☒ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

7

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 2 Problem no.: \_\_\_\_\_  
 Juror: Byland Signature: [Signature]

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles** • the opponent understood the **appropriate mathematics** presented • the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data** • the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent** • the reviewer appreciated the **important aspects** (especially the **controversial** ones) • the reviewer's **personal opinion** was in evidence (**not just superficial observations**) • such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding** of **concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: France 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter ±1

- ☒ Quality of experimental technique(s)
- ☒ Structure
- ☒ Explanation of formulae and symbols
- ☒ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

7

Opp.: Slovenia 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☒ Overall impression

### Opponent ±1

- ☒ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☒ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

4

Rev.: Hungary 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

- ☒ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

5

# Scoring Guidelines

 Fight (Round no.): 4 Room: F Stage: 2 Problem no.: 17

 Juror: KATHRYN Z. 4 Signature: K. Z.

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem
- an **explanation** of the **observed phenomena**
- an **application** of **appropriate mathematics**
- reasonable experimental technique to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate)
- linking of **theoretical** and **experimental findings** to draw **suitable conclusions**
- an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles**
- the opponent understood the **appropriate mathematics** presented
- the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data**
- the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent**
- the reviewer appreciated the **important aspects** (especially the **controversial** ones)
- the reviewer's **personal opinion** was in evidence (**not just superficial observations**)
- such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding of concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

 Rep.: William 5

 Physics  $\pm 3$  +1 1/2

- need 2D model, or at least discuss*
- ☒ Correct and relevant physics
  - ☒ Scientific approach
  - ☒ Validity of conclusions *need more direct comparison of theory and exp.*
  - ☒ Accurate answers

 Presentation  $\pm 1$  +1/2

- ☒ Clear and understandable
- ☒ Appropriate manner
- ☒ Overall impression

 Reporter  $\pm 1$  +1/2

- ☒ Quality of experimental technique(s)
- ☐ Structure
- ☒ Explanation of formulae and symbols
- ☒ Appropriate models, conformity of dimensions
- ☒ Slides, on-site experiments, audio, video, as appropriate
- ☒ References, proper citations of ideas and input of others
- ☒ Novelty of the report
- ☒ Contribution to the discussion

 Final Grade: Reporter 6

 Opp.: Maks 5

 Physics  $\pm 3$  +1 1/2

- ☒ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☒ Accurate answers

 Presentation  $\pm 1$  +1/2

- ☒ Clear and understandable
- ☐ Appropriate manner
- ☒ Overall impression *use all time*

 Opponent  $\pm 1$  +1/2

- ☒ Response to the reporter's solution
- ☒ Shows the strong and weak points of the report
- ☒ Finds shortcomings or errors in the report
- ☒ Relevance of the questions
- ☐ Contribution to the discussion

*Q. about viscosity limits good. Good question about plate spacing. good 2. on original force diagram*

 Final Grade: Opponent 7

 Rev.: Daniel 5

 Physics  $\pm 3$  +1 1/2

- ☒ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☒ Accurate answers

 Presentation  $\pm 1$  +1

- ☒ Clear and understandable
- ☒ Appropriate manner *"err"*
- ☒ Overall impression

 Reviewer  $\pm 1$  +1/2

- ☒ Provides a thorough review of report and discussion
- ☒ Expresses own opinion about topics presented or discussed
- ☒ Relevance of questions to both the reporter and the opponent
- ☒ Draws attention to points missed by the reporter or the opponent

*Great questions.*

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades - please

do not bend

 Final Grade: Reviewer 7

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 2 Problem no.: 11

Juror: A. Kuyeldiev Signature: [Signature]

Flat flow

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles** • the opponent understood the **appropriate mathematics** presented • the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data** • the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent** • the reviewer appreciated the **important aspects** (especially the **controversial** ones) • the reviewer's **personal opinion** was in evidence (**not just superficial observations**) • such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding** of **concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: \_\_\_\_\_ 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter ±1

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

5

Opp.: \_\_\_\_\_ 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

- ☐ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

0

Rev.: \_\_\_\_\_ 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

6

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 3 Problem no.: \_\_\_\_\_  
 Juror: Chuan Yong Li Signature: Chuan Yong Li

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles** • the opponent understood the **appropriate mathematics** presented • the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data** • the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent** • the reviewer appreciated the **important aspects** (especially the **controversial** ones) • the reviewer's **personal opinion** was in evidence (**not just superficial observations**) • such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding** of **concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: Slovenia 5

### Physics ±3

- ☐ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☒ Overall impression

### Reporter ±1

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☒ Explanation of formulae and symbols
- ☒ Appropriate models, conformity of dimensions
- ☒ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

3

Opp.: Hungary 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

- ☐ Response to the reporter's solution
- ☒ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☒ Contribution to the discussion

Final Grade: Opponent

4

Rev.: France 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☒ Overall impression

### Reviewer ±1

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☒ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

5

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 3 Problem no.: 1  
 Juror: Michael Gierling Signature: Ciegi

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable experimental technique to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles** • the opponent understood the **appropriate mathematics** presented • the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data** • the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent** • the reviewer appreciated the **important aspects** (especially the **controversial** ones) • the reviewer's **personal opinion** was in evidence (**not just superficial observations**) • such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding** of **concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: Slovenia

5

### Physics ±3

-1

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

+0,5

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter ±1

-0,5

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

4

Opp.: Hungary

5

### Physics ±3

0

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

+0,5

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

-0,5

- ☐ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

5

Rev.: France

5

### Physics ±3

+1

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

+0,5

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

+0,5

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

7

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 3 Problem no.: 1  
 Juror: Olga Inisheva Signature: [Signature]

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem
- an **explanation** of the **observed phenomena**
- an **application** of **appropriate mathematics**
- reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate)
- linking of **theoretical** and **experimental findings** to draw **suitable conclusions**
- an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles**
- the opponent understood the **appropriate mathematics** presented
- the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data**
- the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent**
- the reviewer appreciated the **important aspects** (especially the **controversial** ones)
- the reviewer's **personal opinion** was in evidence (**not just superficial observations**)
- such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding of concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: Slovenia 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter $\pm 1$

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

3

Opp.: Hungary 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent $\pm 1$

- ☒ Response to the reporter's solution
- ☒ Shows the strong and weak points of the report
- ☒ Finds shortcomings or errors in the report
- ☒ Relevance of the questions
- ☒ Contribution to the discussion

Final Grade: Opponent

5

Rev.: France 5

### Physics $\pm 3$

- ☐ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☐ Accurate answers

### Presentation $\pm 1$

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer $\pm 1$

- ☒ Provides a thorough review of report and discussion
- ☒ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☒ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

6



# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 3 Problem no.: 1  
 Juror: Byland Signature: [Signature]

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles** • the opponent understood the **appropriate mathematics** presented • the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data** • the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent** • the reviewer appreciated the **important aspects** (especially the **controversial** ones) • the reviewer's **personal opinion** was in evidence (**not just superficial observations**) • such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding** of **concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: Slovenia 5

### Physics ±3

- ☐ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☒ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter ±1

- ☒ Quality of experimental technique(s)
- ☐ Structure
- ☒ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

3

Opp.: Hungary 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

- ☒ Response to the reporter's solution
- ☒ Shows the strong and weak points of the report
- ☒ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☒ Contribution to the discussion

Final Grade: Opponent

6

Rev.: France 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

- ☒ Provides a thorough review of report and discussion
- ☒ Expresses own opinion about topics presented or discussed
- ☒ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

6

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 3 Problem no.: 1

Juror: Kathryn Zealand Signature: [Signature]

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem
- an **explanation** of the **observed phenomena**
- an **application** of **appropriate mathematics**
- reasonable experimental technique to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate)
- linking of **theoretical** and **experimental findings** to draw **suitable conclusions**
- an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles**
- the opponent understood the **appropriate mathematics** presented
- the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data**
- the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent**
- the reviewer appreciated the **important aspects** (especially the **controversial** ones)
- the reviewer's **personal opinion** was in evidence (**not** just **superficial observations**)
- such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding of concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: A Gesper 5  
not enough dyn -1 1/2

### Physics ±3

- ☒ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☒ Accurate answers

### Presentation ±1

- ☒ Clear and understandable
- ☒ Appropriate manner *too short*
- ☒ Overall impression

### Reporter ±1

- ☒ Quality of experimental technique(s)
- ☒ Structure
- ☒ Explanation of formulae and symbols
- ☒ Appropriate models, conformity of dimensions
- ☒ Slides, on-site experiments, audio, video, as appropriate
- ☒ References, proper citations of ideas and input of others
- ☒ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

3-4 23

Opp.: Andras 5  
*points need to be made clearer* - 1/2

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☒ Clear and understandable
- ☒ Appropriate manner *be more energetic*
- ☒ Overall impression *approach*

### Opponent ±1

- ☒ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report *need to be more specific*
- ☐ Finds shortcomings or errors in the report

- ☒ Relevance of the questions

- ☐ Contribution to the discussion

*need to engage with his formula,*

Final Grade: Opponent

2-3 23

Rev.: Samuel 5  
*not enough dyn* + 1/2

### Physics ±3

- ☒ Correct and relevant physics
- ☒ Scientific approach
- ☒ Validity of conclusions
- ☒ Accurate answers

### Presentation ±1

- ☒ Clear and understandable
- ☒ Appropriate manner
- ☒ Overall impression

### Reviewer ±1

- ☐ Provides a thorough review of report and discussion
- ☒ Expresses own opinion about topics presented or discussed
- ☒ Relevance of questions to both the reporter and the opponent
- ☒ Draws attention to points missed by the reporter or the opponent

*good clarifies question*

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades - please **do not bend**

Final Grade: Reviewer

6

# Scoring Guidelines

Fight (Round no.): 4 Room: F Stage: 3 Problem no.: 1

Juror: Akyuldjiev Signature: [Signature]

## A report should include:

- a **presentation** of the appropriate **concepts, theories and principles** of the problem • an **explanation** of the **observed phenomena** • an **application** of **appropriate mathematics** • reasonable **experimental technique** to **gather** and **record data** (or **demonstrate** the **phenomena** if appropriate) • linking of **theoretical** and **experimental findings** to draw **suitable conclusions** • an attempt to communicate **difficult** or **complex** ideas in an **effective** and **understandable** manner

## An opposition should show that:

- the opponent **challenged** the **reporter's understanding** of the presented **concepts, theories and principles** • the opponent understood the **appropriate mathematics** presented • the opponent **critiqued** the **experimental technique** used and questioned the **validity** of the **data** • the opponent appreciated and highlighted the **strengths and weaknesses** of the report

## A review should show that:

- the reviewer succeeded in giving an **objective summary** of the performances the **reporter and opponent** • the reviewer appreciated the **important aspects** (especially the **controversial** ones) • the reviewer's **personal opinion** was in evidence (**not just superficial observations**) • such personal opinions were **informative, non-trivial** and demonstrated, where possible, the reviewer's **understanding of concepts, theories, principles and appropriate mathematics** used by the reporter and the opponent

- The grade for each of the three teams consists of a partial grade for **physics, presentation** and for their **specific role**.
- The **reporter, opponent** and **reviewer** each **start with 5 points**.
- Consider the following **suggestions** to **add** to or **deduct** from the initial **5 points**.
- Select each partial grade from each section and **write it** in the corresponding box.
- Don't punish missing 'answers' when no questions were posed or not finding shortcomings if there were none to find.

Rep.: \_\_\_\_\_ 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reporter ±1

- ☐ Quality of experimental technique(s)
- ☐ Structure
- ☐ Explanation of formulae and symbols
- ☐ Appropriate models, conformity of dimensions
- ☐ Slides, on-site experiments, audio, video, as appropriate
- ☐ References, proper citations of ideas and input of others
- ☐ Novelty of the report
- ☐ Contribution to the discussion

Final Grade: Reporter

5

Opp.: \_\_\_\_\_ 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Opponent ±1

- ☐ Response to the reporter's solution
- ☐ Shows the strong and weak points of the report
- ☐ Finds shortcomings or errors in the report
- ☐ Relevance of the questions
- ☐ Contribution to the discussion

Final Grade: Opponent

6

Rev.: \_\_\_\_\_ 5

### Physics ±3

- ☐ Correct and relevant physics
- ☐ Scientific approach
- ☐ Validity of conclusions
- ☐ Accurate answers

### Presentation ±1

- ☐ Clear and understandable
- ☐ Appropriate manner
- ☐ Overall impression

### Reviewer ±1

- ☐ Provides a thorough review of report and discussion
- ☐ Expresses own opinion about topics presented or discussed
- ☐ Relevance of questions to both the reporter and the opponent
- ☐ Draws attention to points missed by the reporter or the opponent

This sheet will be collected by the fight assistant, so we can scan it and archive your partial grades – please  
**do not bend**

Final Grade: Reviewer

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